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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,915	07/31/2003	Gunter Kuechler	010408.52444US	7568

23911 7590 02/22/2007  
CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
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WASHINGTON, DC 20044-4300

EXAMINER
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FICK, ANTHONY D

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/630,915	<b>Applicant(s)</b> KUECHLER, GUNTER	
	<b>Examiner</b> Anthony Fick	<b>Art Unit</b> 1753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1-3</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of group I, claims 1 through 18, in the reply filed on December 15, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 19 through 30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 15, 2006.

### ***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 3, 5, 7, 9, 11, 13, 15, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 3 recites the limitation "the band-shaped structure" in line 1. There is no antecedent basis for this limitation. Applicant can overcome this rejection by amending claim 2 to read a band-shaped structure or amend claim 3 to read the band-shaped

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construction. Claims 5, 7, 9, 11, 13, 15, and 18 all depend from claim 3 and are rejected for the same reasoning.

7. Claim 16 recites the limitation "a subgroup element" in line 1. It is unclear what this limitation encompasses and what elements applicant defines as meeting the requirements of the claim. It is suggested that applicant list the groups in the periodic table that are defined as subgroups.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 through 5, 12 through 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Pollard (U.S. 6,034,322).

Pollard discloses a solar cell assembly including a solar cell connector as shown in figures 4, 4A and 4B.

Regarding claim 1, figure 7 shows the connector to have at least one compensation section with a frame shaped structure.

Regarding claim 2, figure 7 also shows the connector having a band-shaped construction.

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Regarding claim 3, figure 7 further shows the band-shaped structure defining a surface and the frame shaped structure formed by exactly one recess closed in the defined surface.

Regarding claims 4 and 5, figure 7 shows an oval construction for the frame shaped structure.

Regarding claims 12 through 15, Pollard discloses the connector is made of silver or other suitable material (column 6, lines 1-3). Thus the connector consists of a precious metal, silver to be specific.

Regarding claims 17 and 18, these claims are product by process claims and do not further limit the structure of the connector. As the device of Pollard meets all the structural limitations of the claims, it is considered anticipatory for claims 17 and 18.

10. Claims 1 through 5 and 8 through 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Glenn et al. (U.S. 6,359,209).

Glenn discloses a solar cell and a solar cell connector as shown in figures 2, 3 and 4.

Regarding claim 1, figures 3 and 4 show solar cell connectors having at least one compensation section, wherein the at least one compensation section has a frame-shaped structure.

Regarding claim 2, figure 2 shows the connector has a band-shaped construction.

Regarding claim 3, figures 3 and 4 show the band-shaped structure defining a surface. As the claims allow for multiple compensation sections in the connector, the

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connectors in figures 3 and 4 can be interpreted as having a plurality of compensation sections, each formed by exactly one recess closed in the defined surface. Therefore each individual compensation section meets the requirements of claim 3 and the reference is deemed anticipatory.

Regarding claims 4 and 5, figures 3 and 4 show oval construction for the frame-shaped structure.

Regarding claims 8 through 11, figure 6 shows an alternate connector with an angular structure, specifically a polygonal rhombus structure.

Regarding claims 12 through 16, Glenn discloses the interconnect is made of molybdenum with a silver coating (column 5, lines 40-45). Therefore the interconnect consists of a precious metal coating of a conductive material. The precious metal is silver and the conductive material is molybdenum which applicant has stated is a subgroup conductive element.

Regarding claims 17 and 18, these claims are product by process claims and do not further limit the structure of the connector. As the device of Glenn meets all the structural limitations of the claims, it is considered anticipatory for claims 17 and 18.

11. Claims 1 through 7 and 12 through 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ho et al. (U.S.P.G.Pub 2002/0179141).

Ho discloses a solar cell connector as shown in figures 13A and 13B.

Regarding claim 1, figures 13A and 13B show the connector having at least one compensation section (holes in item 1304) wherein the compensation section has a frame-shaped structure.

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Regarding claim 2, the figures also show the connector has a band-shaped construction.

Regarding claim 3, the figures further show the band-shaped structure defining a surface, and each of the compensation sections' frame shaped structure is formed by exactly one recess closed in the surface (holes on left of item 1304).

Regarding claims 4 through 7, figure 13B shows both oval shaped and round shaped holes for the frame-shaped structures.

Regarding claims 12 through 16, Ho discloses the interconnect is made of molybdenum clad with silver (paragraph 0059). Therefore the interconnect consists of a precious metal coating of a conductive material. The precious metal is silver and the conductive material is molybdenum which applicant has stated is a subgroup conductive element.

Regarding claims 17 and 18, these claims are product by process claims and do not further limit the structure of the connector. As the device of Ho meets all the structural limitations of the claims, it is considered anticipatory for claims 17 and 18.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 6 through 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollard as applied to claims 1 through 5, 12 through 15, 17 and 18 above.

The disclosure of Pollard is as stated above for claims 1 through 5, 12 through 15, 17 and 18.

The difference between Pollard and claims 6 through 11 is the requirement of a specific shape for the connector.

The choice of a specific shape for a component is a design decision and absent any unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose round or angular shapes for the connector of Pollard. Therefore the claims are obvious shape variations of Pollard.

14. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glenn as applied to claims 1 through 5 and 8 through 18 above.

The disclosure of Glenn is as stated above for claims 1 through 5, 12 through 15, 17 and 18.

The difference between Glenn and claims 6 and 7 is the requirement of a specific shape for the connector.

The choice of a specific shape for a component is a design decision and absent any unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose round shapes for the connector of Glenn. Therefore the claims are obvious shape variations of Glenn.

15. Claims 8 through 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho as applied to claims 1 through 7 and 12 through 18 above.

The disclosure of Ho is as stated above for claims 1 through 7 and 12 through 18.



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The difference between Ho and claims 8 through 11 is the requirement of a specific shape for the connector.

The choice of a specific shape for a component is a design decision and absent any unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose angular shapes for the connector of Ho. Therefore the claims are obvious shape variations of Ho.

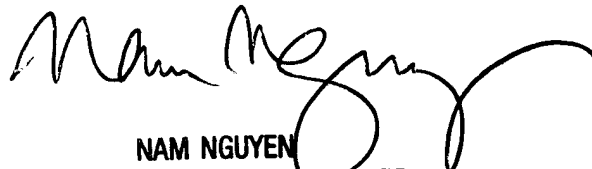
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Fick whose telephone number is (571) 272-6393. The examiner can normally be reached on Monday thru Friday 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Fick *AF*  
AU 1753  
February 15, 2007

  
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